

09/137,907
F.D. 08/21/98

CLAIMS

What is claimed is:

- 5 1. A method for enhanced software fault tolerance in a Distributed Component Object Model comprising the steps of:
- a client maintaining a pool of server object instances on multiple machines;
- the client invoking a first server object instance from the pool with a client request; and
- the client invoking a second server object instance from the pool based on an error by the first server object instance in processing the client request.
- 10 2. The method of claim 1 wherein the error by the first server object instance is identified by the first server object instance.
- 15 3. The method of claim 1 wherein the error by the first server object instance is identified by the client.
- 20 4. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:
- a client; and
- a pool of server object instances on multiple machines, wherein the client maintains the pool of server object instances, the client invokes a first server object instance from the pool with a client request; and the client invokes a second server object instance from the

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pool based on an error by the first server object instance in processing the client request.

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5. The system of claim 4 wherein the error by the first server object instance is identified by the first server object instance.

6. The system of claim 4 wherein the error by the first server object instance is identified by the client.

7. A method for enhanced software fault tolerance in a Distributed Component Object Model comprising the steps of:

determining a number (N) of different server object instances required to achieve a desired reliability or availability of a client;
maintaining a pool of at least N different server object instances on multiple machines;
and
invoking N different server object instances from the pool.

8. The method of claim 7 further comprising the steps of:

identifying an error produced by one of the N different server object instances; and
replacing the server object instance that produced the error with another server object instance from the pool.

9. The method of claim 7 wherein the error is identified by one of the N different server object instances.

10. The method of claim 7 wherein the error is identified by the client.

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11. The method of claim 7 further comprising the steps of:

determining that an error was produced by one of the N different server object instances;
and
removing the server object instance that produced the error, if N is three or greater.

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12. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

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a client; and
a pool of at least N different server object instances on multiple machines, wherein N different server object instances are required, the client maintains the pool, and the client invokes the N different server object instances from the pool to provide software fault tolerance.

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13. The system of claim 12 wherein the system determines that an error was produced by one of the N different server object instances and the server object instance that produced the error is removed from the system, if N is three or greater.

5 14. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

a client; and

a pool of at least N plus one different server object instances on multiple machines, wherein N different server object instances are required, the client maintains the pool, the client invokes N different server object instances from the pool, one of the N server object instances produces an error and the client invokes another server object instance from the pool as a replacement for the server object instance that produced the error.

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15 15. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

a client; and

a pool of at least N plus one different server object instances on multiple machines, wherein N different server object instances are required, the client maintains the pool, the client invokes N different server object instances from the pool, the client identifies an error produced by one of the N different server object instances and the client invokes another server object instance from the pool as a replacement for the server object

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cont'd* } instance that produced the error.

16. A system for enhanced software fault tolerance in a Distributed Component Object Model comprising:

5 a client; and

a pool of at least N plus one different server object instances on multiple machines,
wherein N different server object instances are required, the client maintains the pool, the
client invokes N different server object instances from the pool, one of the N different
server object instances identifies an error produced by one of the N different server object
10 instances and the client invokes another server object instance from the pool as a
replacement for the server object instance that produced the error.